

appropriate occupancy chapter must specifically allow use of the exemption. Compliance with 7.2.1.5.4(3), which requires that the locking device be of a type readily distinguishable as locked, is to be judged by the authority having jurisdiction. Locks specifically designed to meet this requirement often have an indicating window mechanism that displays the word *open* when the device is in the unlocked position and displays the word *locked* when the device is in the locked position.

In permitting up to 10 persons in a locked building, the *Code* does not dismiss them as unimportant. The *Code* recognizes that there are instances where a building must be occupied by security personnel or by janitorial crews when it is locked. Such persons are generally familiar with the premises, and the *Code* requires that they have keys available for egress when necessary. Also see commentary following A.7.2.1.1.3.

The following occupancies allow the use of the key-operated lock addressed by 7.2.1.5.4. Additional restrictions that might be imposed by the occupancy chapter are contained in the paragraphs referenced within parentheses. For example, in new assembly occupancies, use of a key-operated lock is restricted to the main exit of a building with an occupant load of not more than 500 persons. In addition, the main exit of the building is required to consist of a single door or single pair of doors, and any latch on this door(s) is required to be released by panic hardware.

The occupancies allowing the use of the key-operated lock addressed in 7.2.1.5.4 are as follows:

- (1) Assembly occupancies (12.2.2.2.4, 13.2.2.2.4)
- (2) Mercantile occupancies (36.2.2.2.2, 37.2.2.2.2)
- (3) Business occupancies (38.2.2.2.2, 39.2.2.2.2)

7.2.1.5.6 Where permitted in Chapter 12 through Chapter 42, key operation shall be permitted, provided that the key cannot be removed when the door is locked from the side from which egress is to be made.

Paragraph 7.2.1.5.6 permits the “captive key” hardware, as is permitted in lodging and rooming houses via the provisions of 26.2.3.6. The captive key lock has the potential for misuse and must be used carefully. The design of the lock is such that an occupant could unlock the door from the inside, thus freeing the key; move through the door, taking the key to the outside; lock the door from the outside; and leave the property—potentially leaving others locked in the building. Thus, this lock is permitted limited use within the occupancy chapters.

7.2.1.5.7* Every door in a stair enclosure serving more than four stories, unless permitted by 7.2.1.5.7.2, shall meet one of the following:

- (1) Re-entry from the stair enclosure to the interior of the building shall be provided.
- (2) An automatic release that is actuated with the initiation of the building fire alarm system shall be provided to unlock all stair enclosure doors to allow re-entry.
- (3) Selected re-entry shall be provided in accordance with 7.2.1.5.7.1.

A.7.2.1.5.7 It is intended that the re-entry provisions apply only to enclosed exit stairs, not to outside stairs. This arrangement makes it possible to leave the stairway at such floor if the fire renders the lower part of the stair unusable during egress or if the occupants seek refuge on another floor.

Every door in a stair enclosure serving more than four stories in a new building [see 7.2.1.5.7.2(1)] must be arranged to permit re-entry into the building. However, the *Code* recognizes the need for varying degrees of security and does specify some equivalent alternatives. Stairway doors are permitted to be locked to the stairwell side if arranged to unlock automatically upon initiation of the fire alarm system.

7.2.1.5.7.1 Doors on stair enclosures shall be permitted to be equipped with hardware that prevents re-entry into the interior of the building, provided that the following criteria are met:

- (1) There shall be not less than two levels where it is possible to leave the stair enclosure to access another exit.
- (2) There shall be not more than four stories intervening between stories where it is possible to leave the stair enclosure to access another exit.
- (3) Re-entry shall be possible on the top story or next-to-top story that allows access to another exit.
- (4) Doors allowing re-entry shall be identified as such on the stair side of the door.
- (5) Doors not allowing re-entry shall be provided with a sign on the stair side indicating the location of the nearest door, in each direction of travel, that allows re-entry or exit.

Paragraph 7.2.1.5.7.1 permits some stair enclosure doors, regardless of occupancy, to be locked to prevent re-entry on selected floors. In such instances, there must be at least two levels with unlocked doors providing a way out of the stairway, one of which must be the top floor or the next to top floor; the

other is usually the door at the level of exit discharge. Because the *Code* prohibits more than four floors between floors that provide a way out of the stairway, stair enclosures serving more than six or seven stories must have more than two unlocked re-entry points. This arrangement provides flexibility in buildings that, perhaps for security reasons, need to prevent re-entry on certain floors, while at the same time ensuring that one can re-enter the building without having to travel up or down too many flights of stairs. See Exhibit 7.20. Any door providing a way out of the stair enclosure must be identified as such on the stairwell side.

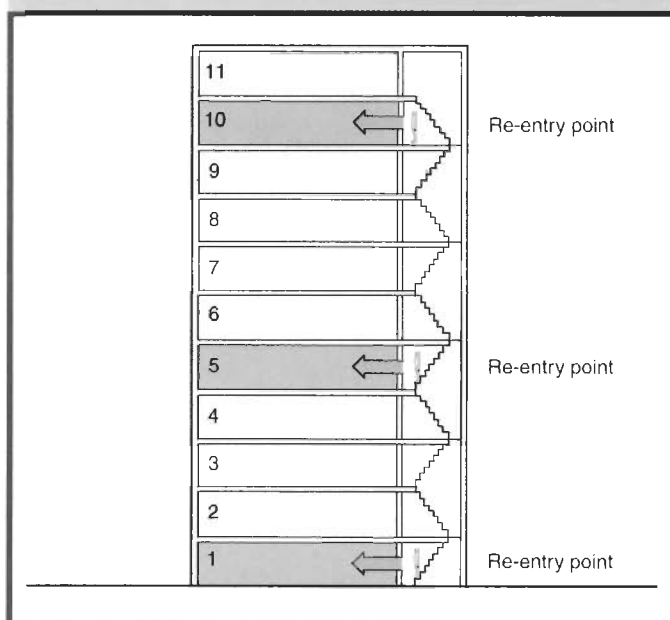


Exhibit 7.20 Stairway re-entry option.

7.2.1.5.7.2 The requirement of 7.2.1.5.7 shall not apply to the following:

- (1) Existing installations as permitted in Chapter 12 through Chapter 42
- (2) Stair enclosures serving a building permitted to have a single exit in accordance with Chapter 11 through Chapter 42
- (3) Stair enclosures in health care occupancies where otherwise provided in Chapter 18
- (4) Stair enclosures in detention and correctional occupancies where otherwise provided in Chapter 22

Paragraph 7.2.1.5.7.2(2) recognizes that re-entry in buildings permitted to have a single exit is not neces-

sary. In most single-exit buildings, the doors from the stairway open directly into the occupant space. Most of the single-exit buildings recognized by the occupancy chapters are no more than four stories in height and are exempt from the stairwell re-entry provisions via the base paragraph of 7.2.1.5.7.

7.2.1.5.8 If a stair enclosure allows access to the roof of the building, the door to the roof either shall be kept locked or shall allow re-entry from the roof.

Paragraph 7.2.1.5.8 was written to prevent building occupants from being trapped on a roof by a locked door that does not permit re-entry into the building. If security concerns, for example, dictate that rooftop doors are to be locked to the outside, then the doors also need to be locked to the inside to prevent unauthorized persons from going to the roof and becoming trapped. Note that there is no requirement that stair enclosure doors provide rooftop access. Heroic helicopter rescues from rooftops of burning buildings are Hollywood movie illusions that seldom happen in real life.

7.2.1.5.9* A latch or other fastening device on a door shall be provided with a releasing device that has an obvious method of operation and that is readily operated under all lighting conditions.

A.7.2.1.5.9 Examples of devices that might be arranged to release latches include knobs, levers, and panic bars. This requirement is permitted to be satisfied by the use of conventional types of hardware, whereby the door is released by turning a lever, knob, or handle or by pushing against a panic bar, but not by unfamiliar methods of operation such as a blow to break glass. The operating devices should be capable of being operated with one hand and should not require tight grasping, tight pinching, or twisting of the wrist to operate.

7.2.1.5.9.1 The releasing mechanism for any latch other than existing installations shall be located not less than 865 mm (34 in.), and not more than 1220 mm (48 in.), above the finished floor.

7.2.1.5.9.2 The releasing mechanism shall open the door with not more than one releasing operation, unless otherwise specified in 7.2.1.5.9.3 and 7.2.1.5.9.4.

Paragraph 7.2.1.5.9 requires that, where a latch or other similar device is provided, the method of opera-